

CLAIMS

What is claimed is:

1. A method for lowering an object to an underwater installation site, wherein use is made of a submersible remotely operated vehicle (ROV) comprising at least one thruster for providing at least lateral thrust, which ROV is interconnectable to the object, which method comprises:
 - a. providing a vessel comprising a winch and an associated suspension cable;
 - b. interconnecting the object and ROV;
 - c. lowering the interconnected object and ROV towards the underwater installation site using the suspension cable, during which the interconnected object and ROV are in a freely suspended state and lateral motion of the interconnected object and ROV is controlled using the thruster of the ROV, which lowering is continued until a holding position is reached in which the interconnected object and ROV are held suspended by the suspension cable at a distance above the installation site;
 - d. providing at least one anchor near the installation site;
 - e. interconnecting each anchor and the ROV with a positioning wire, while the ROV and object are suspended in the holding position;
 - f. tensioning each positioning wire and adjusting the length of each positioning wire such that the interconnected ROV and object are positioned with respect to the installation site; and
 - g. further lowering the interconnected object and ROV which are positioned by the at least one positioning wire onto the installation site while keeping the interconnected object and ROV suspended from the suspension cable.

2. The method of claim 1, wherein multiple anchors are provided at distinct locations and each anchor is connected to the ROV using an associated positioning wire.
3. The method of claim 1, wherein the ROV is provided with a winch for each positioning wire.
- 5 4. The method of claim 3, wherein the ROV is provided with a position detection device and wherein each positioning wire winch is provided with an associated control device connected to the position detection device for controlling the operation of each positioning wire winch.
- 10 5. The method of claim 1, wherein the one or more anchors are placed such that each positioning wire is oriented essentially vertical as the interconnected object and ROV are in the holding position.
6. The method of claim 1, wherein the one or more anchors are placed such that each positioning wire is oriented essentially horizontal as the interconnected object and ROV are in the holding position.
- 15 7. The method of claim 1, wherein the anchor is a suction anchor.
8. The method of claim 1, wherein the ROV is used for placing the one or more anchors near the installation site prior to the lowering of the object.
9. The method of claim 1, wherein heave compensation system is associated with the at least one suspension cable.
- 20 10. The method of claim 1, wherein the ROV comprises a remotely operable connection device for connecting and disconnecting the object and ROV.
11. A submersible remotely operable vehicle comprising a body, a thruster, position detection device, and at least one positioning wire winch, wherein each positioning wire winch comprises a control device and each winch control device is connected to the position detection device.
- 25

12. A method for lowering an object to an underwater installation site, wherein use is made of a submersible remotely operated vehicle (ROV) comprising at least one thruster, which ROV is connectable to the object, which method comprises:
- 5 a. lowering the object into the water and suspending the object in a beneath water surface position;
- b. independently from lowering and suspending the object, lowering the ROV into the water and suspending the ROV in a beneath water surface position;
- c. interconnecting the object and the ROV while in the beneath water surface position; and
- 10 d. further lowering the interconnected object and ROV towards the installation site.
13. The method of claim 12, wherein the beneath water surface position is beneath a wave action effect zone.
14. The method of claim 12, wherein the method further comprises the step of providing an object suspension cable and the object is lowered and suspended in the beneath water surface position using the object suspension cable, and wherein the method further
- 15 comprises providing an ROV suspension cable, distinct from the object suspension cable, and wherein after interconnecting the object and ROV one of the object suspension cable and ROV suspension cable is released from the interconnected object and ROV while the other cable is used for further lowering of the interconnected object and ROV.
- 20 15. The method of claim 12, wherein the method further comprises the step of providing a first object suspension cable, and wherein the method further comprises providing a second object suspension cable, and wherein the method further comprises providing an ROV suspension cable, distinct from the first and second object suspension cables, and wherein the first and second object suspension cables are connected to the object, where
- 25 after the object is lowered into the water using only the first object suspension cable, where after the object is suspended by the second object suspension cable in the beneath

water surface position , wherein after interconnecting the object and ROV the first object suspension cable is released from the interconnected object and ROV while at least one of the other cables is used for further lowering of the interconnected object and ROV.

16. The method of claim 15, wherein after interconnecting the object and ROV also one of the ROV suspension cable and second object suspension cable is released from the interconnected object and ROV, while the other cable is used for further lowering of the interconnected object and ROV.

17. The method of claim 15, wherein the ROV comprises a guide passage through which the second object suspension cable is passed before the object and ROV are lowered into the water.

18. The method of claim 17, wherein the ROV comprises a body comprising a top and a bottom, wherein the ROV suspension cable is connected to the ROV top and the object is connected to the ROV bottom.

19. The method of claim 12, wherein the ROV comprises a guide passage for an object suspension cable extending between the top and the bottom of the ROV.

20. The method of claim 19, wherein the guide passage is a central duct within the ROV body.

21. The method of claim 12, wherein the method further comprises the step of providing a first vessel which carries an object winch and one object suspension cable associated with the object winch and a second vessel which carries an ROV winch and the ROV suspension cable associated with the ROV winch.

22. The method of claim 21, wherein the second vessel carries a second object winch and the second object suspension cable associated with the second object winch.

23. The method of claim 12, wherein a submersible spreader is used, and wherein the ROV is interconnected to the spreader, and the combined spreader and ROV are brought into the

beneath water surface position, and wherein the object is lowered independently into the water and then brought into a stable connection with the spreader.

24. The method of claim 23, wherein the spreader is provided with one or more thrusters.
25. The method of claim 23, wherein a spreader suspension cable is used for suspending and
5 lowering the spreader in combination with the ROV suspension cable.
26. The method of claim 23, wherein the object is connected to the spreader using one or more connecting cables.
27. The method of claim 23, wherein the ROV is located near one end of the spreader and a spreader suspension cable is located near an opposite end of the spreader.
- 10 28. The method of claim 23, wherein the spreader is provided with one or more thrusters, which are connected to the ROV through a control line.
29. A submersible remotely operable vehicle comprising a body, wherein the body comprises a top, a bottom and circumferential side, a thruster, a position detection device, wherein the ROV is provided with two cable guides for an ROV suspension cable, wherein the
15 cable guides are placed at opposite locations near the circumferential side of the body, so that the ROV suspension cable is guided across the body.